

What is claimed is:

1. A combination comprising a plurality of cDNAs that are differentially expressed during adipocyte differentiation and selected from SEQ ID NOs:1-71 or their complements.
2. The combination of claim 1, wherein the differential expression of the cDNAs is greater than 2.5 and selected from SEQ ID NOs:2, 3, 10, 13, 16, 19, 21, 23, 31, 38, 39, 40, 41, 42, 45, 46, 47, 57, 58, and 60.
3. The combination of claim 1, wherein the differential expression of the cDNAs is greater than 3.0 and selected from SEQ ID NOs:1, 6, 7, 20, 48, 49, 59, and 61.
4. The composition of claim 1, wherein differentiating adipocytes are associated with a disorder selected from obesity, type II diabetes, lipodystrophy, or hyperinsulinemia.
5. The composition of claim 1, wherein the cDNAs are immobilized on a substrate.
6. A high throughput method for detecting differential expression of at least one cDNAs in a sample containing nucleic acids, the method comprising:
 - (a) hybridizing the substrate of claim 5 with nucleic acids of the sample, thereby forming one or more hybridization complexes;
 - (b) detecting the hybridization complexes; and
 - (c) comparing the hybridization complexes with those of a standard, wherein differences between the standard and sample hybridization complexes indicate differential expression of cDNAs in the sample.
7. The method of claim 6, where in the nucleic acids of the sample are amplified prior to hybridization.
8. A method of using a cDNA to treat a subject with a disorder selected from obesity, type II diabetes, lipodystrophy, or hyperinsulinemia.
9. A high throughput method of using a cDNA to screen a plurality of molecules or compounds to identify a ligand which specifically binds the cDNA, the method comprising:
 - (a) combining the composition of claim 1 with the plurality of molecules or compounds under conditions to allow specific binding; and
 - (b) detecting specific binding between each cDNA and at least one molecule or compound, thereby identifying a ligand that specifically binds to each cDNA.
10. The method of claim 7 wherein the plurality of molecules or compounds are selected from DNA molecules, RNA molecules, peptide nucleic acid molecules, mimetics, peptides, transcription factors, repressors, and regulatory proteins.
11. An isolated cDNA comprising the nucleic acid sequence of SEQ ID NOs:8-11, 13-15, 20, 22, 31, 32, 38-40, 43-46, 51, 52, 57, 58, 60, 62, 69, and 71.

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12. A vector containing the cDNA of claim 11.

13. A host cell containing the vector of claim 12.

14. A method for producing a protein, the method comprising the steps of:

(a) culturing the host cell of claim 13 under conditions for expression of protein; and

(b) recovering the protein from the host cell culture.

15. A protein or a portion thereof produced by the method of claim 13.

16. A high-throughput method for using a protein to screen a plurality of molecules or compounds to identify at least one ligand which specifically binds the protein, the method comprising:

(a) combining the protein of claim 15 with the plurality of molecules or compounds under conditions to allow specific binding; and

(b) detecting specific binding between the protein and a molecule or compound, thereby identifying a ligand which specifically binds the protein.

17. The method of claim 16 wherein the plurality of molecules or compounds is selected from DNA molecules, RNA molecules, peptide nucleic acid molecules, mimetics, peptides, proteins, agonists, antagonists, antibodies or their fragments, immunoglobulins, inhibitors, drug compounds, and pharmaceutical agents.

18. A method of using a protein to produce an antibody, the method comprising:

a) immunizing an animal with the protein of claim 14 under conditions to elicit an antibody response;

b) isolating animal antibodies; and

c) screening the isolated antibodies with the protein, thereby identifying an antibody which specifically binds the protein.

19. A method of purifying an antibody, the method comprising:

a) combining the protein of claim 14 with a sample under conditions to allow specific binding;

b) recovering the bound protein; and

c) separating the protein from the antibody, thereby obtaining purified antibody.